



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER OF
PATENTS AND TRADEMARKS
Washington, D.C. 20231

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 21

Application Number: 09/108,705
Filing Date: July 07, 1998
Appellant(s): Tetsuro Motoyama

MAILED

SEP 25 2001

Technology Center 2600

Gregory J. Maier
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed July 06, 2001.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The

Art Unit:

Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 37-48, 70-77 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

Art Unit:

matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 37- 48, 70-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al (US Patent No. 5,394,458) in view of Hemmady (US Patent No. 4,872,157).

Concerning claims 37, 43, 74, Allen et al disclose a reproduction system and method (Figs. 1-2) of diagnosing a first device (1 and 6) by a second device (5), which has an ability of diagnose different types of devices, wherein the first device includes a communication interface 6 for transmitting information from a reproduction apparatus 1 the second device (an administrative device 5) which identifies a type of the reproduction apparatus 1 (type of first device), initializes a status database 20, and selects a symptom to diagnose the reasons and probabilities (condition) of the reproduction apparatus 1, (col. 5, lines 7-36). The information is transmitted from the reproduction apparatus to the administrative device 5 via a telephone network and a modem 4, or a standard RS-232 protocol (col. 3, line 30 - col. 4, line 7). The system and method comprises means or steps for transmitting, through a communication line (public phone lines or data line, Fig.1), first information (col. 4, lines 56-59) from the first device (1, 6) to the second device 5; receiving by the second device 5, the first information which has been transmitted; determining by the second device 5, second information (such as data related to the reproduction apparatus use, feature utilization of the reproduction apparatus) utilized by the first device, wherein the second information is a first portion of the first information; parsing, by the second device, a second portion of the first information (such as the error history and billing data) using the second

Art Unit:

information which has been determined, wherein the second portion is different from the first portion; and diagnosing a condition of the first device by the second device using the second portion which has been parsed.

Allen does not directly teach that the communication lines between the first device and the second device are communication channel. However, Allen teaches that "communication may be effected either directly via the RS-232 interface 3 or via the telecommunication modem 4." (Col. 3, lines 32-34). RS-232 interfaces includes a serial data port and data line with additional input and output control and/or status lines. Modem 4 converts a digital signal into a modulated analog signal capable of being transmitted over a standard (public) non-dedicated telephone line (col. 3, lines 36-50). Thus the first device transmits information to the second device through a communication channel of the data line connected to the RS-232 or the public phone lines connected to the modem 4 wherein both of the communication lines are equivalent to communication channels. In addition, Allen does not specifically mention that the first information includes first portions and second portion. However, since Allen teaches the first information sent from the first device to the second device includes a plurality of different information which can be divided into 2 portions wherein the first portion can be considered as data related to the reproduction apparatus use, feature utilization of the reproduction apparatus since the first device utilizes these information for operating the reproduction apparatus, and the second portion can be considered as the error history and billing data for the second device to diagnose the condition of the first device. It would have been obvious at the time the invention

Art Unit:

was made to a person having ordinary skill in the art to consider the communication lines in Allen are communication channels since the first and second devices transmit and receive information through these communication lines, and the received information is divided into two different portions for the second device to determine the information utilized by the first device through the error history and billing data equivalent to the first portion and the information for diagnosing a condition of the first device through the error history and billing data equivalent to the second portion as claimed.

Allen does not directly teach that the first device (1, 6) includes different business office devices. However, in the Background of the Invention, Allen et al teaches that “in large business and government offices which use a large number of reproduction apparatus, it is desirable for cost allocation purposes to keep a central record of the total number of copies produced by all of the reproduction apparatus, and also of the number of copies produced in each section or division of the office, some of which may have access to two or more reproduction apparatus ...” (Col. 1, lines 30-41), and “In a large organization having many sections, each having access to many reproduction apparatus, a key counter for each section must be provided to each reproduction apparatus ...” (col. 1, lines 59-65). Thus, the purpose of the invention is to remotely diagnose a plurality of reproduction apparatuses and not only one reproduction apparatus. Since a reproduction apparatus can be a copier, a printer, a facsimile machine having a printer since they can reproduce or duplicate documents, Allen indirectly teaches the diagnosis of different types of devices or business office devices. In addition, Hemmady teaches, in Fig. 2, different types of

Art Unit:

user devices including different business office devices connected to MAN (metropolitan area network), (col. 3, lines 23-36; col. 5, lines 9-63). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine the teaching of a device connected to a different business office devices in Hemmady to the system in Allen et al since Allen indirectly teaches that the diagnostic device 5 can be connected to different types of reproduction apparatus which are considered as different business office devices due to the fact that the first device (1, 6) can have different communication lines connecting to different types of devices.

Allen does not directly teach that the parsing of the second portion is for determining a format of the second portion. However, the reproduction apparatus 1 in Allen et al can be connected to a computer 5 through different communication lines such as public phone lines through modem 4 or data communication line through RS-232 interface or other similar computer system interfaces (Fig.1). Thus, according to different communication lines, the system in Allen uses different protocols and different format signals. For instance, Allen teaches that when the data communication line is through RS-232 interface (digital communication), the standard RS-232 protocol is used, and when the data communication line is through the modem (analog communication), modem 4 has to convert the digital output by the machine control and diagnostic circuitry 2 into modulated analog signal capable of being transmitted over a public phone lines. Thus, Allen teaches the uses of different protocols according to different communication lines. Allen further teaches that in the digital communication, RS format signals

Art Unit:

are used while in the analog communication, the modem 4 converts the RS-232 format signals into analog signals suitable for transmission (col. 3, line 24 - col. 4, line 7). Thus, Allen indirectly teaches the uses of different protocols and different formats based on different communication lines. In addition, Hemmady, in Fig.20, teaches data packet message format with different portions having different information such as protocol identifier (624, 638), group identifier (616), group name (618) considered as a first portion, packet length (622, 636), UWU length (634), type of service indicator (623), initial byte number (639), destination and source location (612, 614, 642, 644), header check sequence (626) ... considered as a second portion for determining a format of the packet (col. 62, lines 15-49). Hemmady further teaches different protocol identifiers for different protocols and different link format (col. 42, line 53 - col. 44, line 23; col. 51, lines 47-67; col. 52, lines 43-47; col. 57, line 39 - col. 58, line 51). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine the teaching of the data packet message format in Hemmady to the transmitted information through the communication lines in Allen et al since Allen et al indirectly teaches the uses of different protocols and the conversion to different format signals according to the transmission through different communication lines.

Concerning claims 38-42, 44-48, 75-77, Allen further teaches the means or step of determining by the second device a device identification for the first device (100-102, Fig.2; col.5, lines 18-25); selecting an input format of data stored in a data base and selecting an input format for a facsimile machine and copier machines (102-103; col. 5, lines 21-26).

Art Unit:

It is noted that the first device (1, 6) is considered as a copier machine since it includes a reproduction apparatus 1, and a facsimile machine (1, 6) since it can communication with other remote apparatus through communication lines by the use of the communications interface having a modem 4. In addition, the fact that Allen teaches that the first device can communicates with the second device through different protocol such as RS-232 protocol, or modem protocol inherently teaches that the communication system can communication with different devices having different protocols (col. 3, lines 24-62).

Concerning claims 70-73, Allen fails to teach that the identification of the type of the first device is a protocol identifier including a header format. Hemmady et al discloses a data processing system for connecting a plurality of inlets to a plurality of outlets comprising a first plurality of terminals connected to one of the plurality of inlets for controlling the storage of header information of each data packet and a second plurality of terminals for processing the header information and queuing data packets destined for a common outlet. Fig.20 shows a message format wherein the header 610 consists of the destination address 612, the source address 614, the group identifier 616, group name 618, the type of service 620, a type of service indicator 623, a protocol identifier 624. The header 610 is followed by a header 630 to process message fragmentation. This header 630 includes the protocol identifier 638 for identifying the contents of the internal protocol which is the header of user data 640. Finally, user data 640 may be preceded for appropriate user protocols by the identity of the destination port 642 and source port 644 (col. 62, lines 15-49). Hemmady et al further teaches that a header format of data is

Art Unit:

contained in the device identification for the first device, and the second device determines the header format of data contained in the device identification by selecting the header format of data from a protocol identifier data base (col. 62, lines 15-49). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the protocol identifier with a header format as taught in Hemmady et al in the transmitted information from the first device to a second device in Allen in order for the second device to determine the protocol identifier utilized by the first device since both Allen and Hemmady teach the transmission and reception of data packets from and to different devices thereby permitting both on-site and remote communication with a diagnostic and administrative device for the purpose of recording apparatus usage, feature utilization, and performing diagnostic routines on reproduction apparatus.

(11) Response to Argument

Argument with Respect to Group I

1. Applicant remarks that the motivation to combine the data package message format of Hemmady et al into the system of Allen is clearly insufficient as Allen et al do not disclose, desire, need or suggest the use of more than one communication protocol on a single communication line.

Allen discloses a system for remote monitoring different types of reproduction apparatus using different data communication channels such as public phone lines for analog signals and

Art Unit:

digital lines connecting to RS-232 interface (Fig.1). Hemmady et al teaches "This invention of a metropolitan area network is a computer and telephone communication network that has been designed for transmitting broadband low latency data ..." (col. 5, lines 34-39). Thus, both Allen and Hemmady teaches the communications between computer and telephone communications networks. The system in Allen performs diagnostic routines on different types of reproduction apparatus such as copier/duplicator, printer of any well known type (col. 3, lines 5-8), complex machinery (col. 5, lines 36-45), the diagnostic and administrative device 5 can be different types such as personal computer, laptop computer, mini or mainframe computer locally or remotely connected to the reproduction apparatus 1 (col. 4, lines 4-14). Allen also teaches different types of communications lines, for instance, for analog signals: standard (public) non-dedicated telephone line, PSTN, PBX, (col. 3, lines 45-50; col. 4, lines 25-35) standard digital communication line (connecting to RS-232 interfaces or other similar computer system interfaces) (col. 3, lines 36-44). Hemmady teaches metropolitan area networks serving a variety of different types of end user systems ranging from simple reporting devices and low intelligence terminals through personal computers to large mainframes and supercomputers (Fig.2) wherein one of the operations of the system is for diagnosis (col. 29, lines 18-63). The fact that, both of Allen and Hemmady systems connect to different type of terminals and capable of communicate with different data communication lines, requires the use of different protocols in the conversion to different format signals. Allen further teaches that if the computer system interface is RS-232 interface, "signal transfer to the modem 4 occurs using the standard RS-232 protocol" (col. 3,

Art Unit:

line 51-55) and “modem 4 converts the RS-232 format signals utilized by the communication control and memory 7 of the communication interface 6 into analog signals suitable for transmission over an ordinary telephone line, and conversely converts analog signals received from the telephone line into standard RS-232 format signals” (col. 3, line 63 - col. 4, line 1).

Thus, with computer system interfaces different from the RS-232 interface, the signal transfer to the modem occurs using protocol different from the standard RS-232 protocol, and the modem has to convert interface format signals which are different from the RS-232 format signals into analog signals for transmission, and conversely converts analog signals received from the telephone line into format signals different from the standard RS-232 format signals. Thus, Allen teaches the use of more than one communication protocol on a single communication line for digital data transmission and reception. Therefore, there is a need to utilize a protocol identifier as the protocol is known based on what line is used for transmission. Besides, It is noted that, as taught in Hemmady et al, the use of data packet message format for digital data communication is well known in the art.

Although Allen et al do not disclose, desire, need or suggest the use of more than one communication protocol on a single communication line, it is not necessary that the references actually suggest, expressly or in so many words, the changes or improvements that application has made. The test for combining references is what the references as a whole would have suggested to one ordinary skill in the art. In re Shecker, 168 USPQ 716 (CCPA 1971); In re MaLaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 725 (CCPA 1968).

Art Unit:

2. Applicant remarks that Allen et al communicate by always having the reproduction apparatus and/or the communication interface 6 generate RS-232 format signals. Under no circumstances in Allen et al is there disclosed or suggested a single communication line utilizing multiple communication protocols.

As previously stated above, Allen teaches that "other similar computer system interfaces may be substituted for the RS-232 interface" (col. 41-44). Since Allen teaches that if RS-232 is used, signal transfer to the modem 4 occurs using the standard RS-232 protocol and the modem converts the RS-232 format signals into analog signals and conversely convert analog signals into RS-232 format signals. Thus, for different computer system interfaces different than RS-232, the protocol and format signals must be different from the RS-232 protocol and format signals. Then, the combination of Hemmady et al and Allen is affirmative.

3. Applicant remarks that Hemmady et al teaches that when there is a broad variety of communications and multiple protocols which are to be transmitted over a single network, protocol identifiers can be used to assist with the communication. As Allen et al only disclose that one particular type of communication protocol can be transmitted over a specific connection (e.g. RS-232 communications over a RS-232 communication line, and analog communication signals generated by a modem over a telephone line, the protocol identifier is not useful in the system of Allen et al and one of ordinary skill in the art would never modify Allen et al to use the protocol identifier set forth in Hemmady et al because there is absolutely no need for it.

Art Unit:

As mentioned above, both Allen et al and Hemmady et al teaches the use of multiple protocols over a single network. In addition, the test for obviousness is not whether the features of the reference may be bodily incorporated into the other to produce the claimed subject matter but simple what the reference make obvious to one of ordinary skill in the art. In re Bozek, 163 USPQ 545, (CCPA 1969); In re Richman 165 USPQ 509, (CCPA 1970); In re Beckum, 169 USPQ (CCPA 1971); In re Sneed, 710 F.2d 1544, 218 USPQ 385.

The rejection of claims 37-42, 70-71 in group I under 35 U.S.C. 103(a) as being unpatentable over Allen et al in view of Hemmady et al is maintained.

Arguments for Group II

4. Applicant remarks that claims 43-48, 72-73 in group II are apparatus claims of method claims 37-42, 70-71 in group I. Since Allen et al and Hemmady et al cannot be combined for the reasons explained in detail above, the invention of group II is patentable over the combination of Allen et al and Hemmady et al.

Since examiner reasons that Allen and Hemmady et al can be combined in the manner set forth in the outstanding Office Action for the reasons explained in details above and the rejection of claims 37-42, 70-71 in group I under 35 U.S.C. 103(a) as being unpatentable over Allen et al in view of Hemmady et al is maintained., the invention of group II under 35 U.S.C. 103(a) as being unpatentable over Allen et al in view of Hemmady et al is also maintained.

Art Unit:

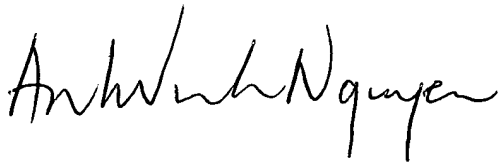
Arguments for Group III

5. Applicant remarks that the rejection of Group III should be withdrawn for the same reasons explained above with regard to Group I.

The remarks of Group II above is repeated for Group III.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Anh Vinh Nguyen". The signature is fluid and cursive, with the first name "Anh" and last name "Nguyen" being more prominent.

Madeleine Anh-Vinh Nguyen
Primary Patent Examiner
Art Unit 2622
September 21, 2001